IN THE CLAIMS

1. (currently amended) A method of planarizing a non-planar conductive surface layer on the workpiece, comprising:

applying a metallic conducting material layer having substantially a same conductivity characteristic as the non-planar conductive surface layer onto a top surface of the conductive surface layer of the workpiece using one of a spin-on, spray, doctor blading or other application technique that does not involve electroplating so that a top surface of the conducting material layer is planar, thus forming a planarized multi-layer structure that includes the non-planar conductive surface layer and the metallic conducting material layer; and

electropolishing the planarized multi-layer structure to remove in a planar manner at least portions of the non-planar conductive layer and other portions of the metallic conducting material layer, wherein the electropolishing in the planar manner is assisted by using conducting material in the metallic conducting material layer that electropolishes at substantially the same rate as the non-planar conductive surface layer.

2. (currently amended) The method according to claim 1, further comprising the step of annealing the metallic conducting material layer so that at least one solute within the metallic conducting material layer diffuse with the conductive surface layer.

3. (currently amended) The method according to claim 2, further comprising the step of continuing to anneal the metallic conducting material layer so that the diffusion of the solute progresses into features of the conductive surface layer.

4. (original) The method according to claim 1 further comprising the step of removing any remaining portion of the planarized multi-layer, thereby exposing a barrier layer.

5. (original) The method according to claim 4, wherein the step of removing uses a chemical mechanical polishing process.

6. (original) The method according to claim 4, wherein the step of removing uses one of a wet etching process.

7. (original) The method according to claim 1 further comprising the step of removing any remaining portion of the planarized multi-layer and a barrier layer, thereby exposing the dielectric layer.

8. (original) The method according to claim 7, wherein the step of removing uses a chemical mechanical polishing process.

9. (original) The method according to claim 7, wherein the step of removing uses one of a wet etching process and a reactive ion etching process.

10. (currently amended) The method according to claim 1 wherein the metallic conducting material layer comprises at least one of a conducting paste, a conducting slurry and a conducting emulsion.

11. (currently amended) The method according to claim 1 wherein the metallic conducting material layer comprises a conducting slurry.

12. (currently amended) The method according to claim 1 wherein the metallic conducting material layer comprises a conducting emulsion.

13. (currently amended) The method according to claim 1 wherein the metallic conducting material layer comprises a conducting low melting point metallic powder.

14. (currently amended) The method according to claim 1 wherein the metallic conducting material layer comprises a first layer of a conducting low melting point metallic powder and a second layer of a slurry.

15. (original) The method according to claim 1 wherein the step of electropolishing uses an electrochemical mechanical etching process.

16. (original) The method according to claim 1 wherein the step of electropolishing uses an electrochemical etching process.